ABSTRACT

EFFECT OF DIETHYL PHTHALATE CONCENTRATION ON *Lactobacillus casei* FNCC0090 RELEASE FROM MICROPARTICLE (Methacrylic Acid Copolymer L Type as Matrix)

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Microencapsulation is defined as a process in which the active ingredient is encapsulated with polymeric matrix to provide protection against environmental influences, improves stability, control the release of active ingredients. *Lactobacillus casei* FNCC 0090 is used as an active ingredient which will be made into microparticles by spray drying method with 120 ^{o}C inlet temperature using metahcrylic acid copolymer L type as polymer matrix and diethyl phthalate as plasticizer. The effect of diethyl phthalate concentration on *Lactobacillus casei* FNCC 0090 release from microparticle determine by using four formula with 0,0%; 10,0%; 20,0%; and 30,0% from matrix concentration. Release test were perfomed in all formula was performed in two different conditions to know the release of *Lactobacillus casei* FNCC 0090 in simulated gastric fluid (pH 1,2) and simulated intestine fluid (pH 6,8). The result showed that there was no release of probiotic in simulated gastic fluid. In simulated intesitine fluid, release efficiency of *Lactobacillus casei* FNCC 0090 from microparticle decrease with increasing diethyl phthalate concentration.

Keywords: Microencapsulation, Spray drying, *Lactobacillus casei* FNCC 0090, methacrlic acid copolymer L type, diethyl phthalate, release efficiency